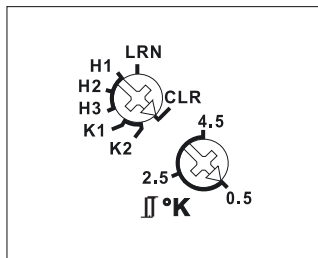
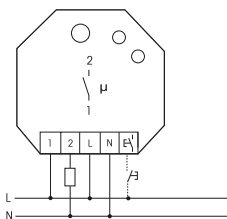


### Function rotary switches



Standard setting ex works.

### Typical connection



Manuals and documents in further languages:  
<https://eltako.com/redirect/FHK61U-230V>

## FHK61U-230V



**1 NO contact potential free 10 A/250 V AC. Only 0.8 watt standby loss.**

**Encrypted wireless, bidirectional wireless and repeater function are switchable.**

For installation. 45 mm long, 45 mm wide, 33 mm deep.

Supply voltage 230 V.

If a power failure occurs, the switching state is retained. If a power failure occurs repeatedly, the device is switched off in a defined sequence.

By using a bistable relay coil power loss and heating is avoided even in the on mode. After installation, wait for short automatic synchronisation before the switched consumer is connected to the mains.

**This heating/cooling relay evaluates the information from wireless temperature controllers or sensors. Possibly supplemented by window/door contacts, motion detector, window handle sensor FFG7B and wireless pushbuttons.**

**You can teach in encrypted sensors.** You can switch on **bidirectional wireless** and/or a **repeater** function.

Every change in state of the contact is confirmed by a wireless telegram.

This wireless telegram can be taught-in into other actuators and controllers. Especially into a FSR61 to synchronously switch a heat circulating pump with the valves.

**Upper rotary switch for operating modes:**

**H1:** Heating operation with PWM control at T = 4 minutes (PWM = pulse width modulation).

(suitable for valves with thermoelectric valve drive)

**H2:** Heating operation with PWM control at T = 15 minutes.

(suitable for valves with motor-driven valve drive)

**H3:** Operating mode with 2-point control.

**K1:** Cooling operation with PWM control at T = 15 minutes.

**K2:** Cooling mode with 2-point control.

Switchover is visualised by LEDs flashing.

**Lower rotary switch for adjustable hysteresis and PWM influence:**

**Left stop:** lowest hysteresis 0.5°. **Middle position:** hysteresis 2.5°. **Right stop:** largest hysteresis 4.5°.

Inbetween, divisions in steps of 0.5° visualised by LEDs flashing.

**Two-point control mode:** The hysteresis rotary switch sets the required difference between the switch-on and switch-off temperatures.

When the 'actual temperature  $\geq$  reference temperature', the device is switched off.

When the 'actual temperature  $\leq$  (reference temperature - hysteresis)', the device is switched on.

The signs are the opposite in cooling mode.

**PWM control mode:** The hysteresis rotary switch set the required temperature difference at which the device is switched on at 100%. When the 'actual temperature  $\geq$  reference temperature', the device is switched off. When the 'actual temperature  $\leq$  (reference temperature - hysteresis)', the device is switched on at 100%. If the 'actual temperature' lies between the 'reference temperature - hysteresis' and the 'reference temperature', the device is switched on and off with a PWM in steps of 10% depending on the temperature difference. The lower the temperature difference, the shorter the switch-on time. As a result of the settability of the 100% value, the PWM can be adapted to the heater size and inertia. The signs are the opposite in cooling mode.

In heating mode, the **frost protection function** is always enabled. As soon as the actual temperature drops below 8°C, the temperature is controlled in the selected operating mode to 8°C.

If one or several windows are open, the output remains off **provided the window/door contacts FTK or window handle sensors FFG7B** are taught-in. In heating mode, however, the frost protection remains enabled.

As long as all taught-in **motion detectors FBH** detect no motion, the device is switched to setback mode.

In heating mode, the reference temperature is set back by 2°; in cooling mode, it is raised by 2°. As soon as a motion detector signals movement again, the device is switched to normal mode.

When a **wireless pushbutton FT4** is taught-in, the assignment of the 4 keys is assigned with the following fixed functions:

Top right: Normal mode (can also be enabled by timer). Bottom right: Night setback mode by 4°; in cooling mode, raised by 4° (can also be enabled by timer). Top left: Setback mode by 2°, in cooling mode, raised by 2°. Bottom left: Off (in heating mode, frost protection enabled; in cooling mode permanent off). If the motion detector and wireless pushbutton are taught-in at the same time, the last telegram received is always the one that is valid. A motion detector therefore switches off a setback mode selected by wireless pushbutton when a movement is detected.

**The LED** performs during the teach-in process according to the operating instructions. It shows wireless control commands by short flickering during operation.

FHK61U-230V	Wireless actuator Heating/cooling relay	Art. No. 30100050	80,00 €/pc.
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